

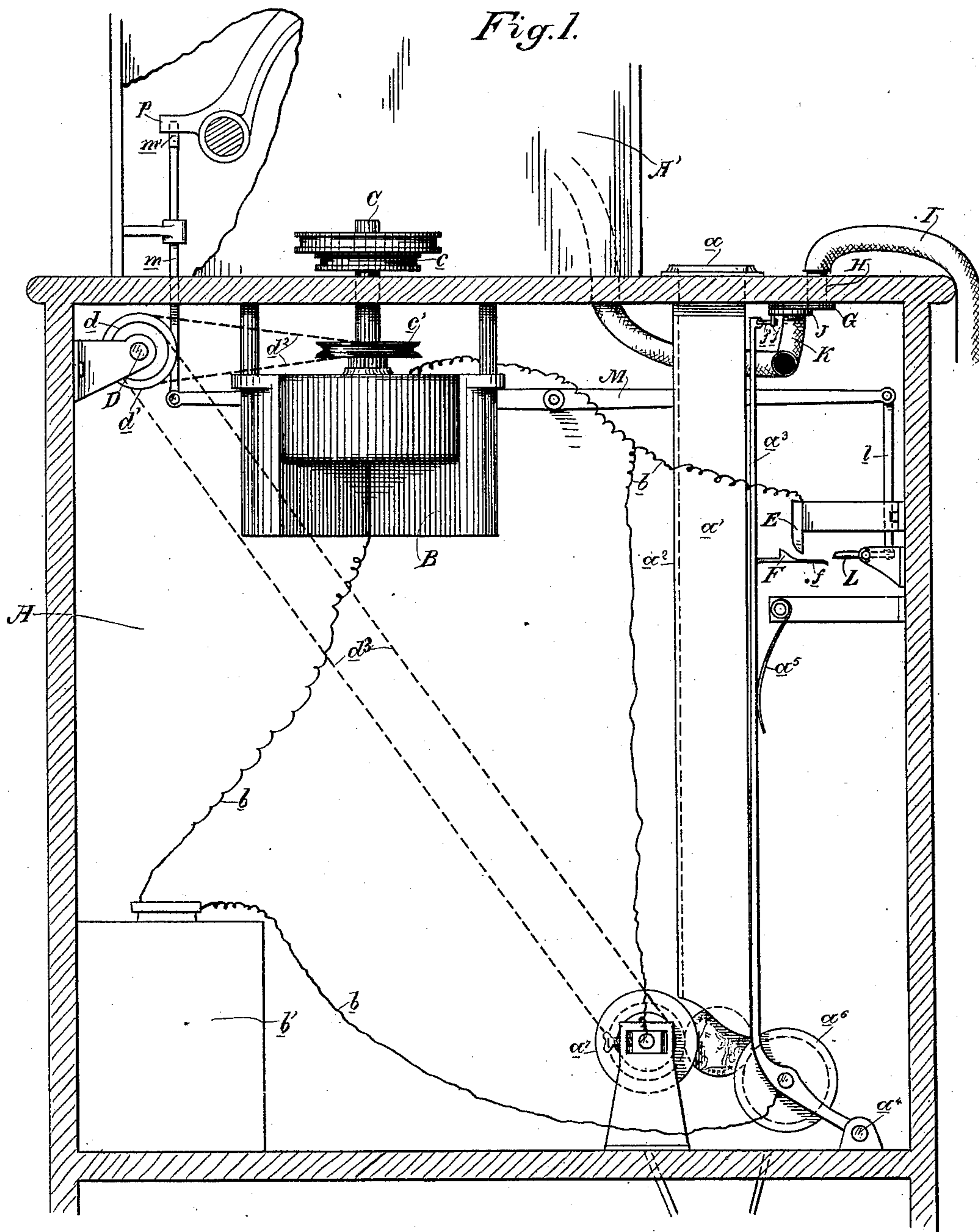
(No Model.)

2 Sheets—Sheet 1.

L. GLASS & W. S. ARNOLD.
COIN ACTUATING ATTACHMENT FOR PHONOGRAPHS.

No. 428,751.

Patented May 27, 1890.



Witnesses,
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UNITED STATES PATENT OFFICE.

LOUIS GLASS AND WILLIAM S. ARNOLD, OF SAN FRANCISCO, CALIFORNIA,
ASSIGNORS TO R. W. SMITH, OF SAME PLACE.

COIN-ACTUATING ATTACHMENT FOR PHONOGRAPHS.

SPECIFICATION forming part of Letters Patent No. 428,751, dated May 27, 1890.

Application filed February 3, 1890. Serial No. 339,069. (No model.)

To all whom it may concern:

Be it known that we, LOUIS GLASS and WILLIAM S. ARNOLD, citizens of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Coin-Actuating Attachments for Phonographs; and we hereby declare the following to be a full, clear, and exact description of the same.

Our invention relates, generally, to the class of devices designed to be operated by the deposit of a suitable coin, and especially to an attachment of this class intended to be operated in connection with a phonograph.

Our invention consists in the novel constructions and combinations hereinafter fully described, and specifically pointed out in the claims.

The object of our invention is to provide a suitable device by which the phonograph may be exhibited and heard by any one upon the deposit of a suitable coin.

Referring to the accompanying drawings for a more complete explanation of our invention, Figure 1 is a vertical section of the main case A, showing the interior parts. Fig. 2 is a plan of the top of the case. Fig. 3 is a perspective view looking from underneath of the means for establishing and breaking the bearing-passages. Fig. 4 is a plan view of the rollers a^6 and a^7 and a horizontal section of the coin-passage a' . Fig. 5 is a plan of the arm P of the phonograph and the arm m of the disengaging-lever M.

A is the main box or casing, upon the top of which is a casing A', in which the phonograph, unnecessary herein to show in full, is contained.

In the top of the box A are the several openings or slots a , in which the coins are to be put. Coin-passages a' communicate with these slots, said passages being formed by a stationary back wall a^2 and a movable or swinging front wall or strip a^3 , said last-named wall being pivoted below at the point a^4 and having its top free, so that said wall may swing to or from the fixed wall, and is held to a normal position by a spring a^5 . Near its lower end the swinging wall a^3 carries a roller a^6 . Opposite this roller and below the end of the stationary wall is a roller a^7 , the faces of both rollers being suitably grooved and standing normally separated and in direct

line with the open bottom of the coin-passage, whereby the coin drops into and between the peripheries of the two rollers.

B is the motor of the phonograph, to which the circuit-wires b are directed from the battery b' . These wires are so directed as to include the rollers a^6 and a^7 as electrodes normally separated. The motor-shaft C carries on its top the usual sheave or pulley c , from which a belt extends to and operates the phonograph. Upon the same shaft C, but within the box, is a pulley c' . Along the back of the box is mounted longitudinally a shaft D, having upon it the pulleys d , corresponding in number to the coin-passages. This shaft also carries a pulley d' , to which a belt d^2 extends from the pulley c' on the motor-shaft, whereby a rotary motion is imparted to the shaft D. From the pulleys d of said shaft extend belts d^3 down to each of the rollers a^7 below, whereby said rollers are rotated. Within the box and suitably located with respect to each swinging wall a^3 are a series of catches E, to which the circuit-wires b extend, thereby making said catches electrodes of the circuit. The circuit-wires b also extend, as shown, to the bottom of the movable walls a^3 of the coin-passages, whereby said walls are formed into electrodes. Upon each wall is a spring-catch F in such a position that when the wall is moved away from the stationary wall the latch will engage the catch E.

The operation of the mechanism as far as described is as follows: A coin dropped into one of the slots a passes down through the coin-passage and, dropping between the rollers a^6 and a^7 , serves as an electrical connection between them and closes the circuit. This sets in operation the motor, which thereupon rotates roller a^7 , and which has the effect of positively forcing the coin between the two rollers, whereby the swinging wall a^3 is forced over until its latch F engages catch E. The coin, being fed down through between the two rollers, no longer acts as a circuit-closer; but the circuit is still closed by the latch and catch and the phonograph mechanism is set in operation.

To accommodate the rollers to different sizes of coins, the boxes in which the rollers a^7 are mounted may be made adjustable, as shown.

Now, in order to hear the phonograph, we

have the following construction: Under the top of the case A and just to one side of each coin-passage is a fixed plate G, having a hole in it, and with this hole communicates a short tube H, passing through the top of the box and having connected with it the hearing-tube I, which hangs down in front of the box.

J is a swinging plate having connected with and opening through it a flexible tube K, which thence extends upwardly through the box and communicates with the spectacle of the phonograph through a tube common to all the tubes K. The plate J is held normally in such a position that its tube K, opening through it, is out of alignment or communication with the aperture in the upper plate G and with the tube H of said aperture. This normal position of the plate J may be maintained in any suitable manner, as by means of a spring or by reason of the position and flexibility of the tube K, connected with it, so that when thrown out of position the constrained position of the tube K will cause the plate to return to its normal position.

Upon the end of the plate J is a small contact-piece j , with which the top arm j' of the swinging wall a^3 is adapted to come in contact when said wall is moved over.

The operation again is as follows: When the visitor deposits his coin in one of the slots, he applies the proper hearing-tube I to his ears. The movement of the swinging wall a^3 of the coin-passage, as heretofore described, and which closes the motor-circuit to set the machine in operation, also, through its arm j' coming in contact with the lug or projection j , swings the plate J over, whereby its tube K is brought into alignment or communication with the tube H and the hearing-tube I, so that the sound of the phonograph is transmitted to the ears of the visitor. When the wall a^3 is released, as we shall presently describe, the plate J returns to its normal position, carrying the tube K out of alignment with the tube H, whereupon the sound is no longer conveyed.

The release of the wall a^3 is accomplished by the following mechanism: The latch F has an extension f , and with this a trip-bar L, extending over all the latches, is adapted to come in contact. This bar is connected by a link l with one end of a pivoted lever M, the other end of which has extending upwardly from it an arm m , the top of which is provided with a pivoted contact-piece m' , which is so hinged as to move only in one direction and is controlled by a spring m^2 .

P is an arm, which projects rearwardly from the spectacle-frame, and is adapted by the movement of said frame to come into contact with the piece m' of the arm m . Now, when the spectacle-frame has reached the limit of its forward movement, and the operation should cease, the arm P comes in contact with the piece m' , which is unyielding in this direction. This contact forces down the arm

m , swings the lever M, lifts up on the link l , and throws the inner end of the trip-bar L downwardly into contact with the extension f of the latch F, thereby releasing said latch from the catch E, whereupon the spring a^5 returns the swinging wall a^3 to its normal position and the circuit is broken.

The mechanism for returning the spectacle for a repetition of the operation we have not herein deemed it necessary to illustrate, as it forms a portion of a previous application for a patent, Serial No. 334,196, filed December 18, 1889, and it is necessary herein only to state that when the spectacle reaches the end of its travel suitable automatic means are employed for returning it to its first position for a repetition of the operation, and in this return the arm P does not interfere with the contact-piece m' , which simply yields before it without affecting the connected mechanism.

It will be observed that in the construction of the hearing-connections herein described a desirable object is effected of having a series of slots, so that more than one person can hear the phonograph at one time and yet each be required to deposit his coin. He cannot take advantage of the deposit of another's coin, because the plate J, in connection with each coin-passage, operates independently of its neighbor, and each only is set in operation upon the deposit of a coin in its own passage. Therefore if but a single coin be deposited the plate J of that particular coin-passage alone is operated, the other plates J remaining in normal position, with their tubes K out of alignment with the tubes H, so that even if another person applies a separate hearing-tube I to his ears he cannot hear the phonograph, as the sound is cut off by the plate J.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In coin-actuated attachments, the combination of an electric motor and normally-open motor-circuit, a movable or swinging roller, and an opposing roller, said rollers forming the normally-separated electrodes of the motor-circuit and adapted to receive the coin between their peripheries, whereby the circuit is closed, and power-transmitting devices between the motor and one of the rollers, whereby when the circuit is closed said roller is rotated, thereby feeding the coin through between the rollers and swinging the movable roller, substantially as herein described.

2. In coin-actuated attachments, the combination of the swinging roller, the opposing roller a^7 , the coin-passage for directing the coin between the rollers, the electric motor and motor-circuit, including the rollers as electrodes, and the transmitting mechanism between the motor and the roller a^7 , substantially as herein described.

3. In coin-actuated attachments, a pivoted or swinging strip whose movement calls into action the machine, in combination with the

means for effecting its movement, consisting of the roller carried by said strip, the opposing roller a^7 , and a coin-passage by which the coin is directed between the two rollers, the electric motor, the motor-circuit, including the rollers as electrodes, and the transmitting devices from the motor for rotating roller a^7 , substantially as herein described.

4. In coin-actuated attachments, the combination of the swinging strip a^3 , the roller a^6 carried by it, the opposing roller a^7 , the coin-passage a' , for directing the coin between the rollers, the latch F on the swinging strip, the catch E, with which the latch engages, the electric motor, the circuit thereof, including the rollers and the latch and catch as electrodes, and the transmitting devices from the motor for rotating roller a^7 , substantially as herein described.

5. In coin-actuated attachments, the coin-passage a' , having a stationary back wall and a swinging front wall a^3 , in combination with the roller a^6 , carried in the lower end of the swinging wall, and the opposing roller a^7 , between which and the roller a^6 the coin is directed and passes, whereby the swinging wall is forced over, substantially as herein described.

6. In coin-actuated attachments for phonographs, a hearing-tube communication with the spectacle of the phonograph, normally disjointed at any given point, and means, operated by the inserted coin, for joining said tube, substantially as herein described.

7. In a coin-actuated attachment for phonographs, the hearing-tube, and a separate tube communicating with the spectacle of the phonograph and lying normally out of line with the hearing-tube, and means operated by the deposited coin for bringing the two tubes into line, whereby the sound may be carried through them, substantially as herein described.

8. In a coin-actuated attachment for phonographs, the hearing-tube, in combination with the swinging plate J and the tube K, connected with and opening through it, said tube communicating with the spectacle of the phonograph, and means operated by the deposited coin for swinging the plate J so as to bring its tube K into line and communication with the hearing-tube, substantially as herein described.

9. In a coin-actuated attachment for phonographs, the combination of the hearing-tube, the swinging plate J, the tube K, connected therewith and opening through it, said tube communicating with the spectacle of the phonograph, and the swinging strip a^3 , operated by the deposited coin and adapted to come in contact with the plate J and move it, whereby the tube K is brought into line and communication with the hearing-tube, substantially as herein described.

10. In a coin-actuated attachment for pho-

nographs, the combination of the swinging strip a^3 , operated by the deposited coin and having the arm j' at its top, the plate G, having the hearing-tube connected with it, the pivoted or swinging plate J, the tube K, opening through said plate and communicating with the spectacle of the phonograph, and the projection j of said plate, with which the arm of the swinging strip is adapted to come in contact, whereby the plate is moved to bring its tube into line and communication with the hearing-tube, substantially as herein described.

11. In a coin-actuated attachment for phonographs, the combination of the swinging strip a^3 , operated by the deposited coin, the electric motor and motor-circuit, the latch and catch E F, forming electrodes of said circuit and operated by the swinging strip, and the means for breaking said circuit, consisting of an arm m in the path of a portion of the traveling spectacle-frame of the phonograph and connections between said arm and the electrodes, whereby they are separated, substantially as herein described.

12. In a coin-actuated attachment for phonographs, the swinging strip a^3 , the latch F thereof, the catch E, the motor and the motor-circuit, including the latch and catch, and the means for releasing the latch and catch, consisting of the extension f of the latch, the trip-bar L, the pivoted lever M, connected with said trip-bar, and the arm m of said lever in the path of a portion of the spectacle-frame, substantially as herein described.

13. A coin-actuated attachment for phonographs, consisting of the combination of the coin-passages a' , the swinging strips a^3 , the rollers a^6 , carried by the strips, and the opposing rollers a^7 , the latch F of the strips, and the catch E, the motor and motor-circuit of which the latch and catch and the rollers form electrodes, power-transmitting connections between the motor and the rollers a^7 , whereby they are rotated, the hearing-tubes I, the swinging plates J, the spectacle-tubes K, opening through said plates and adapted to be brought into line with the hearing-tubes by the movement of the plates, the contact-connection between the swinging strips a^3 and the plates J, whereby they are operated, and the means for returning the parts to position, consisting of the trip-bar L, operating on the latches F, the swinging lever M, connected with said bar, and the arm m of the lever, extending into the path of an arm of the spectacle-frame, substantially as herein described.

In witness whereof we have hereunto set our hands.

LOUIS GLASS.

WILLIAM S. ARNOLD.

Witnesses:

E. H. THARP,

GEO. H. BRADSHAW.